

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

1 | 1. (Currently Amended) An apparatus ~~for detecting that detects~~ voice activity in
2 | a communication signal, said apparatus comprising:

3 | ~~a)~~ filter means for performing an estimation or a suppression of an offset
4 | component of ~~the a~~ level of said communication signal;

5 | ~~b)~~ parameter control means ~~(46)~~ for controlling a filter parameter of said
6 | filter means based on an output of said filter means; and

7 | ~~c)~~ limitation means ~~(16; 35, 39)~~ for limiting said suppression or said
8 | estimation of said offset component in response to said output of said filter means.

9 | wherein said filter means comprises a notch-type filter with a notch at zero
10 | frequency, and

11 | said limitation means comprises a non-linear element with a limitation
12 | characteristic for suppressing transmission of negative signals through a recursive
13 | path of said notch-type filter.

1 | 2. (Currently Amended) An apparatus according to claim 1, further comprising:

2 | level calculation means ~~(42)~~ for calculating a short-term level of said
3 | communication signal, and

voice activity control means ~~(48)~~ for comparing input and output levels of said filter means.

3. (Original) An apparatus according to claim 1,
wherein said offset component is a noise floor component of the level of said communication signal.

4. (Canceled).

5. (Currently Amended) An apparatus according to claim 1,
wherein said filter means comprises a low-pass filter for extracting said offset component, and said limitation means ~~(35, 39)~~ comprises:
comparing means ~~(39)~~ for comparing said extracted offset component with said communication signal and
switching means ~~(35)~~ for selecting one of said extracted offset component and said communication signal in response to an output of said comparing means ~~(39)~~.

6. (Currently Amended) An apparatus according to claim 1,
wherein said parameter control means ~~(46)~~ adapted to set said filter parameter to a first value which leads to a lower tracking speed of said estimation,

4 ~~if-when~~ the level of said communication signal falls below ~~the-a~~ level of said
5 estimated offset component, and to set said filter parameter to a second value which
6 leads to a higher tracking speed of said estimation, ~~if-when~~ the level of said
7 communication signal is higher than the level of said estimated offset component.

1 7. (Currently Amended) An apparatus according to claim 6,
2 wherein said parameter control means ~~(46)~~ is adapted to apply an
3 exponential adaptation of said filter parameter within ~~the-a~~ limitation of
4 predetermined parameter values.

1 8. (Currently Amended) A method of detecting voice activity in a communication
2 signal, said method comprising ~~the steps of~~:
3 a) filtering an offset component of ~~the-a~~ level of said communication signal;
4 b) controlling a filter parameter used in said filtering ~~step~~, based on ~~the-a~~
5 result of said filtering step; and
6 c) limiting said filtering ~~step~~ in response to the result of said filtering step,
7 wherein said filtering is adapted to suppress said offset component by
8 applying a filter characteristic with a notch at zero frequency, and
9 said limiting is performed by applying a limitation characteristic for
10 suppressing transmission of negative signals.

1 | 9. (Canceled).

2 | 10. (Currently Amended) A method according to claim 8,

3 | wherein said filtering ~~step~~ is adapted to extract said offset component, and

4 | said ~~limitation-step-limiting~~ further comprises: ~~the steps of~~

5 | comparing the extracted offset component with the level of said

6 | communication signal and

7 | selecting one of said extracted offset component and said level of said

8 | communication signal in response to ~~the a~~ comparing result.